

**THE DEVELOPMENTAL IMPACT OF
EARLY CHILDHOOD TRAUMA**

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- Child Trauma—Models and Projects
- Child Trauma Academy
childtrauma.org
- The Neurosequential Model of
Therapeutics
- Bruce Perry, MD, PhD

EARLY ABUSE AND NEGLECT

- **WHAT IS THE SCOPE OF THE PROBLEM?**
 - Three Million Child Abuse Reports Per
Year
 - One Million are Substantiated
 - The Meaning of Substantiation
 - Realistic Figures



CHILD TRAUMA: THE SOCIAL PROBLEM

- **ADVERSE CHILDHOOD EXPERIENCES (ACE)
STUDY BY CDC AND KAISER**
 - 17,337 Adult Subjects make up the Total Sample
 - 11% Emotionally Abused
 - 30.1 % Physically Abused (approx 94 million, if figured as 30% of the US pop = 300,000,000)
 - 19.9 % Sexually Abused
 - 23.5 % Exposed to Alcohol Abuse
 - 18.8 % Exposed to Mental Illness
 - 12.5 % Exposed to Battering of Mothers

THE LONG TERM CONSEQUENCES OF NEGLECT AND ABUSE

- *Cutting Across All the Dimensions of Behavior, Emotions and Thought*
- *Over Time and Across Settings*
- *Health Care Dollars and Public Welfare*



COMPLEX DEVELOPMENTAL TRAUMA

- **THE TWO CASES OF TRAUMA:**
 - Child # 1
 - Eight year old male
 - Intact early childhood
 - Experiences serious animal attack
 - Suffers full spectrum of symptoms
 - Treated and recovers

COMPLEX DEVELOPMENTAL TRAUMA

- THE TWO CASES OF TRAUMA:
 - Child # 2
 - Eight year old female
 - Both parents addicted to drugs
 - Home is a bus stop for other users and dealers
 - Serious neglect off and on since birth
 - Sexual abuse during sixth year
 - Few symptoms other than poor attention in school, no close friends, and resistance to supervision
 - Surprising competence at survival skills

COMPLEX DEVELOPMENTAL TRAUMA

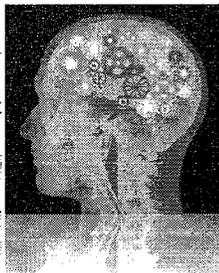
- THE TWO CASES OF TRAUMA—*Outcome*
 - Child # 2 The second child goes on to have severe behavior problems and marked oppositional attitudes toward caretakers and authorities, an overall poor school performance, unsuccessful and conflicted peer relationships. She initiates drug use in middle school, is sexually active by 14, and eventually serves time as a juvenile for repeated probation violations. She goes on to a conflicted and violent marriage, has children whose custody is assumed by the state, and repeats the cycle.

COMPLEX DEVELOPMENTAL TRAUMA

- Children like the second fill the case loads of social workers, psychologists and therapists, child psychiatrists and probation officers. They first enter the child protective system, then transition to the psychiatric hospitals and RTCs, and eventually enter the juvenile justice system. As Bessel van der Kolk notes, *“People with childhood histories of trauma, abuse and neglect make up almost the entire criminal justice population in the U.S.”* (van der Kolk, 2004)

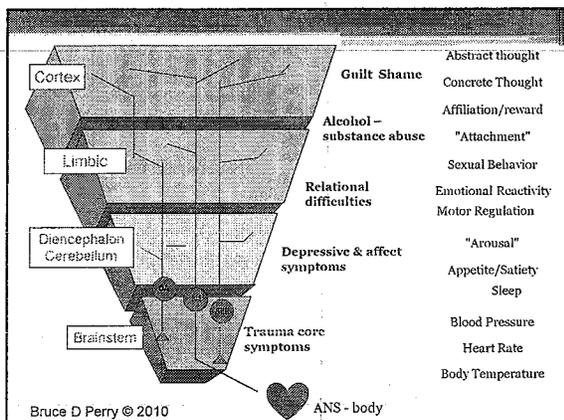
Sequential Neurodevelopment

- The brain is undeveloped at birth
- The brain organizes from the "bottom" up - brainstem to cortex and from the inside out
- Organization and functional capacity of neural systems is sequential
- Experiences do not have equal significance throughout development



COMPLEX DEVELOPMENTAL TRAUMA

- The undeveloped brain at birth organizes and grows in a sequential fashion—starting from the lowest regulatory regions (*e.g. heart rate and blood pressure*) of the brain and proceeding through the higher parts of the brain responsible for more complicated functions (*e.g. planning, impulse control, and abstract thought*) (Perry, 2006)



COMPLEX DEVELOPMENTAL TRAUMA

- Therefore, early trauma, including parental separation, early neglect and abuse, all damage and dysregulate the more basic and regulatory parts of the brain. This damage, in turn, impairs the development of higher brain functions. (Perry, 2006)

COMPLEX DEVELOPMENTAL TRAUMA

- The three fundamental effects of abuse and neglect are all related to the core traits of delinquent behavior
 - *Dysregulation of arousal*
 - *Dysregulation of reward*
 - *Disturbance of attachment*

COMPLEX DEVELOPMENTAL TRAUMA

- BASIC REGULATORY FUNCTIONS are NORMALLY ESTABLISHED in INFANCY and EARLY CHILDHOOD
 - By caretakers who soothe, comfort, and consistently attend to the infant
 - Through the protection of the infant from environmental and interactional stressors
 - By the external regulation of the infant who is not initially capable of self-regulation



COMPLEX DEVELOPMENTAL TRAUMA

• The PERSISTENT FEAR RESPONSE and the SIGNS of HYPERAROUSAL:

- Impulsivity
- Reactivity
- Aggression
- Hyperactivity



• DIAGNOSED AS:

- ADHD
- Bipolar Affective Disorder
- Learning Disability
- Conduct Disorder



COMPLEX DEVELOPMENTAL TRAUMA

• HOW DOES EARLY NEGLECT AND ABUSE ALTER ATTACHMENT?

- Attachment is an early developmental task determined by healthy attachments at early sensitive periods.
- The ability to attach, first to the caretaker and then later to other attachment figures, is definitively affected by our earliest attachment experiences in infancy and early childhood.
- Sensitive periods / critical periods

COMPLEX DEVELOPMENTAL TRAUMA

• Very early infant foundations of empathy are found in initial bonding operations:

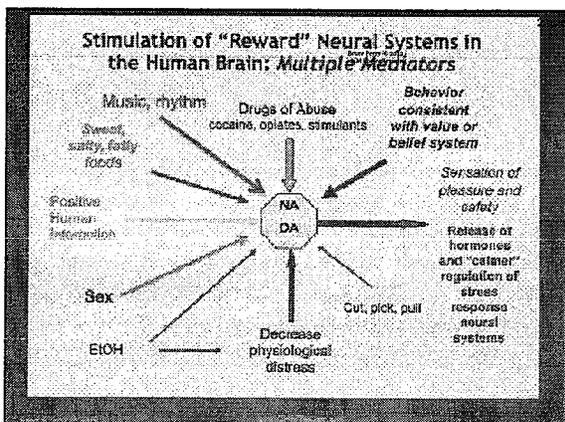
(Meltzoff and Decety, 2003)

- Imitation of facial expressions
 - Response to distress calls of other infants
 - Eye contact and response
 - Imitation of vocalizations
- Refinement and advancement of empathic responses develop into early adulthood

COMPLEX DEVELOPMENTAL TRAUMA

- REWARD AND REINFORCEMENT
 - The earliest source of reward is proximity and attention from the primary caregiver
 - Attachment and close interpersonal interaction is driven and accompanied by the primary neurotransmitters associated with reward
 - The reward circuit is activated by attachment in both the caregiver and the infant

- It is possible that neural mechanisms that we associate with drug abuse and addiction might have evolved for social recognition, reward and euphoria—critical elements in the process of attachment. (Insel and Young, 2001)



COMPLEX DEVELOPMENTAL TRAUMA

- **EARLY TRAUMA IS A BRAIN DISORDER...**
 - More than it is psychological or emotional
 - It is primarily pre-conscious and pre-verbal
 - It is not likely to be accessible to traditional verbal therapies
 - More similar to head trauma than to depression or anxiety

SUMMARY

- The Traumatic Experience Causes Changes in Brain *Chemistry* in the Developing Child...
- Changes in Chemistry in turn Cause Changes in Brain *Function* and *Anatomy*...
- Ultimately, Changes in Function and Anatomy Alter *Thought* and *Behavior*...
- Including the Ability to *Attach* and Care for the Next Generation of Children
